Journal of the American College of Cardiology Vol. 60, No. 18, 2012

Published by Elsevier Inc.
ISSN 0735-1097/$36.00
http://dx.doi.org/10.1016/j.jacc.2012.07.039

EDITORIAL COMMENT

Value-Based Insurance Design in Cardiology

Using "Clinical Nuance" to Improve Quality of Care and Contain Costs*

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The past several decades have produced remarkable technological and therapeutic innovations in the prevention and treatment of cardiovascular disease, resulting in impressive reductions in cardiovascular-related morbidity and mortality (1,2). These enhanced clinical outcomes coincide with a time of significant stress within our health care system, namely, with the burden of ballooning costs of care. In recent years, health care spending has grown much faster than the rate of inflation, with cardiovascular expenditures accounting for the largest portion of spending (3,4).

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At these growth rates, expenditures related to cardiovascular disease are estimated to triple over the next 20 years, approaching $1 trillion by 2030 (2). The challenge for health system reform is to enable continued improvements in care while containing the growth in expenditures.

In this issue of the *Journal*, Choudhry et al. (5) report on the clinical and economic implications of an intervention by a large private employer to align patient cost sharing with the clinical benefit—not the price—of essential medications. Cost shifting to consumers in the form of increased premiums, and cost sharing at the point of service, is a common and effective technique to control health care expenditures. The theoretical basis for cost sharing in the form of copayments and deductibles is to involve consumers in the decision making around care choices, particularly when considering the use of low-value or unproven services (6,7). By assuming a portion of the cost, patients have some responsibility regarding the selection of services that are of most value to them on the basis of their preferences and medical needs.

A major limitation of typical cost-sharing arrangements in most private and public health plans in the United States is that patients' copayments are typically set at the same price for a certain type of service (e.g., physician visit, hospital stay, drug within a formulary tier) regardless of the relative clinical value of specific interventions within each type of service. In such a "one-size-fits-all" system, there is no inherent consideration of the evidence-based effectiveness of an intervention. Published research clearly shows that as copayments have increased for all services, regardless of their clinical value, decreased utilization has resulted for essential screening, clinician visits, and treatments, often leading to worse outcomes and in some cases higher aggregate expenditures (6,8–14).

Cost-containment efforts should not produce preventable decreases in the quality of care. Thus, value-based insurance design (V-BID) was developed to mitigate the negative clinical consequences of one-size-fits-all models of patient cost sharing. The basic premise of V-BID is to remove barriers to essential, high-value health services. Using a "clinically nuanced" approach, patients assume an out-of-pocket cost proportional to the clinical value—not the price—of a given service (15). V-BID incorporates available evidence regarding the clinical benefit for a given intervention and can be tailored for application to a specific patient or group (16).

This evidence-based approach to patient cost sharing is innovative in its ability to make highly effective care more attractive by reducing or eliminating patient barriers. Conversely, increasing patient cost sharing can make poorly effective, lower value care less desirable. By promoting the most effective cardiovascular interventions, V-BID programs act to increase the quality of care received by patients and add efficiency to the system as a whole.

Choudhry et al. (5) evaluated a V-BID program that reduced patient cost sharing for average-risk patients prescribed statins and clopidogrel. Lower patient out-of-pockets costs were associated with improvements in patient medication adherence, with cost neutrality in overall health care spending. Rates of physician office visits, emergency department admissions, and hospitalizations were lower among patients with lower copayments for statins and clopidogrel. These findings were similar to those reported

*Editorials published in the *Journal of the American College of Cardiology* reflect the views of the authors and do not necessarily represent the views of *JACC* or the American College of Cardiology.

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JACC Vol. 60, No. 18, 2012
October 30, 2012:1825–7

by the same group in the MI FREEE (Post–Myocardial Infarction Free Rx Event and Economic Evaluation) study, a randomized trial in which elimination of cost sharing for guideline-recommended drugs for patients after myocardial infarction was compared with conventional cost-sharing arrangements (17). In that study, patients randomized to elimination of out-of-pocket costs for high-value, evidence-based cardiovascular medicines showed significant reductions in several important secondary outcomes, including reductions in the rates of first major vascular events, total major vascular events, and revascularization. Notably, the results of both studies by Choudhry et al. (5) were achieved without increasing total health care costs.

It is important to note that V-BID programs never dictate what services are to be included or excluded from coverage by payers. Clinically nuanced designs merely reset copayments on the basis of clinical benefit instead of purchase price. Available evidence suggests that variable cost-sharing structures will decrease cost-related nonadherence of high-value services. By avoiding absolute "covered or not" decisions, V-BID may reduce unnecessary conflict or perception of conflict among providers, payers, and patients; in so doing, it can protect the integrity of the physician-patient relationship in forming patient-centered tailored plans of care.

V-BID is distinct from, yet complementary to, many other health reform proposals. Popular initiatives that target health systems and clinicians, such as global payment systems, accountable care organizations, patient-centered medical homes, and value-based purchasing programs, shift financial risks and incentives for quality and efficiency to health systems and providers. These "supply-side" strategies often do not explicitly address consumer incentives, the "demand side" of this complex system. Alignment of clinical and financial aims for providers and patients, rather than just providers, will likely lead to faster achievement of program goals.

Cardiovascular medicine is well suited for V-BID implementation, because clinically nuanced programs perform best when there is high-quality evidence and/or consensus regarding the benefits of care. There are potential V-BID applications along the entire continuum of cardiovascular care, from primary prevention and risk factor management to diagnosis and medical management of cardiovascular disease, through resource-intensive interventions. In fact, several large public and private organizations have already successfully applied V-BID programs. Aetna, the nation's fourth largest health insurance company, has used a copayment relief program for patients with histories of heart disease. Other public and private organizations that have implemented V-BID include the city of Asheville, North Carolina, the states of Oregon and Maine, Pitney Bowes, the Marriott Corporation, United Healthcare, and several labor groups. The Mercer National Survey of Employer-Sponsored Health Plans reports that value-based insurance design use is increasing and that 81% of large employers plan to offer it in the near future (18). In these applications, V-BID has improved quality measures, including medication adherence rates, hospitalizations, and disability days in a potentially cost-saving manner (19–21). Encouraged by the success of private-sector implementation, V-BID was explicitly included in the Patient Protection and Affordable Care Act (§ 2713[c]). V-BID has also been highlighted in the Institute of Medicine's report Essential Health Benefits: Balancing Coverage and Cost (22) and in the 2012 Medicare Payment Advisory Committee (23) report to Congress, in which V-BID was promoted as a potential direction for Medicare benefit redesign.

Many health reform proposals that focus primarily on cost containment will be directed by nonclinicians, who may have a limited understanding regarding quality of care. Thus, to ensure that patient-centered outcomes remain a critical policy priority, cardiologists will be required to have a facile understanding of the quality and value of their services and be adept at communicating that value to policy makers and health care administrators. Novel approaches that embed clinical nuance in payment and benefit designs have the advantage of inherently directing care toward efficient and effective interventions without requiring undue physician administrative efforts or internecine budgetary conflicts among providers. V-BID is an intuitive, feasible concept that could be applied to address the well-documented underuse of lifesaving clinical services for the diagnosis, prevention, and treatment of cardiovascular disease. Choudhry et al. (5) demonstrate that incentivizing evidence-based medication use can lead to tangible clinical benefits without increasing costs. Similarly, V-BID principles can go beyond medications to incentivize high-value procedure use, such as implantable cardioverter-defibrillators for patients with ejection fractions $\leq$35% and medically optimized New York Heart Association class II or III heart failure, as well as percutaneous coronary intervention in patients with Canadian Cardiovascular Society class III or IV angina despite maximal antianginal therapy. Although increasing utilization of these services would increase short-term health care expenditures, future cost offsets occur when costly complications are avoided or when the utilization of low-value service can be reduced.

Health care reform strategies that simultaneously address quality improvement and cost containment have the potential to increase the amount of health achieved for the money spent. Cardiologists can shape reform efforts by clearly defining high-value and low-value cardiovascular services and embracing innovative payment reform and benefit designs that will better enable the provision of patient-centered, evidence-based care.

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Key Words: health spending ■ medication copayment ■ value-based insurance.